United States Patent [19]

Pansiera

[11] **Patent Number: 4,802,467**

[45] **Date of Patent: Feb. 7, 1989**

[54] **BI-CENTRIC KNEE JOINT SUPPORT**

[76] Inventor: **Timothy Pansiera,** 1050 NW. First Ave., Boca Raton, Fla. 33432

[21] Appl. No.: **191,508**

[22] Filed: **May 9, 1988**

[51] **Int. Cl.**[4] **A61F 5/04**

[52] **U.S. Cl.** ..... **128/88;** 128/80 C; 16/354; 623/39

[58] **Field of Search** ..... 128/80 C, 80 F, 80 R, 128/80 B, 80 J, 89 R, 89 A, 88; 16/354; 623/39

[56] **References Cited**

U.S. PATENT DOCUMENTS

887,369	5/1908	Wilmot	16/354
1,351,955	9/1920	Lowry	623/39
1,698,136	1/1929	Lawrence	16/354
3,954,023	5/1976	Aguilar	16/354
4,493,316	1/1985	Reed et al.	128/88
4,524,764	6/1985	Miller et al.	128/88
4,599,748	7/1986	Garcia	128/80 C
4,614,454	9/1986	Kassai	16/354
4,633,867	1/1987	Kausek	128/88
4,643,176	2/1987	Mason	128/80 C
4,684,158	8/1987	Miclot	16/354

Primary Examiner—Edgar S. Burr
Assistant Examiner—Huong Q. Pham
Attorney, Agent, or Firm—Melvin K. Silverman

[57] **ABSTRACT**

There is disclosed a bi-centric joint for use in an orthopedic support system which includes a plurality of interdigitating tubular elements, secured upon planar base means, in which hubs from which said tubular elements project are secured to proximal and distal sections of the orthopedic apparatus. The length of each interdigitating tubular radial spoke is such that, upon the passage of said spoke through a centerline defined by the centers of rotation of the hubs, a pivot action at the end of such spoke against a peripheral surface of said proximal or distal section will occur. The result is a simulation of natural movement of a human joint.

5 Claims, 2 Drawing Sheets